ages because of the disease's symptoms and variability, leading to reduced social engagement. *exchange rate: 303,59HUF/EUR

PMS24
EARLY RETIREMENT INDIRECT COSTS ATTRIBUTABLE TO RHEUMATIC DISEASES IN PORTUGAL
Laires PA[1], Canhão H[2], Gouveia M[3]
[1]Sociedade Portuguesa de Reumatologia, Lisbon, Portugal, [2]Faculdade de Medicina, Universidade de Lisboa, Lisboa, Portugal, [3]Católica Lisbon School of Business and Economics, Lisbon, Portugal
OBJECTIVES: Rheumatic diseases (RD) cause physical disability that may lead to early retirement, generating high indirect costs to society. We estimate these costs in the Portuguese population approaching the statutory retirement age. **METHODS:** Health, sociodemographic and occupational data was retrieved from the 4th National Health Survey (2005/2006), for all people between 50 and 64 years of age (3,762 men and 4,241 women), whilst an official wage national database was used to estimate productivity values by gender, age-group and region, using the human capital approach. The effects of RD on the likelihood of early retirement and the attributable fractions estimates were obtained at the individual level by logistic regression. **RESULTS:** At the time of the survey, 37.2% of the population with ages 50-64 years old self-reported at least one RD and among these 22.7% were officially retired, compared with 17.6% of those without RD ($p<0.001$). Females had higher prevalence of RD (49.8% vs. 23.4% for males; $p<0.001$). Presence of RD was associated with early retirement regardless of age, gender and region (OR=1.3; CI 95%: 1.0 - 1.6). The estimated annual indirect costs following premature retirement attributable to RD were €367 million (€504 per RD patient). Age-groups closer to the statutory retirement age contribute more to the overall indirect costs and also have higher individual productivity values. For instance, 60-64 years old age-group contribute with 52% of overall costs and had an average indirect cost of 699€ per RD patient. Females were responsible for about 55% of these costs, however males contribute with higher individual productivity losses (cost per patient: 788€ vs. 390€, for males and females respectively). **CONCLUSIONS:** Annual early retirement indirect costs attributable to RD are considerable. These results highlight the need to target patients with rheumatic conditions in order to obtain health and productivity gains and reduce early retirement in society.

PMS25
BURDEN OF DISEASE ANALYSIS OF PSORIATIC ARTHRITIS IN HUNGARY
Hegyi R[1], Nagy B[1], Koncz A[2], Huybrechts I[3], Lavicky J[4], Ferenczik A[1]
[1]Healthware Consulting Ltd., Budapest, Hungary, [2]UCB Pharma, Budapest, Hungary, [3]UCB Pharma, Brussels, Belgium, [4]UCB Pharma, Prague, Czech Republic
OBJECTIVES: Psoriatic arthritis (PsA) entails an individual burden to patients and ties up resources. This study aimed to assess the total costs of PsA, including the indirect burden of PsA patients in Hungary and to obtain an overview of patients' status, demographics, morbidity, and working capacity. **METHODS:** Between January–March 2014, a questionnaire survey was conducted among PsA patients and filled out voluntarily and anonymously. Missing data was not imputed in the analysis; considered patient number is presented next to results if lower than total patient number. **RESULTS:** 145 patients completed the questionnaire, of which 57% were women. Mean age was 54 years (Standard Deviation [SD]: 14 years) and average disease duration was 17 years (SD: 11 years). At primary diagnosis of PsA, 79% of patients had a full-time job, 4% a part-time job and only 3% received disability pension. At time of survey, only 32% of patients worked full-time, 4% part-time, and the proportion of disability pensioners increased to 28%. Cost calculation results* showed that the average annual total cost per PsA patient was 3,842€. Within this, average annual direct non-medical cost was approximately 1,318€ (141 patients) and average annual indirect cost per patient was approximately 2,635€ (142 patients). Wage loss due to disability pension generated the highest average annual indirect cost per patient (2,734€ – 119 patients). In the working-age population (95 patients, 31–62 years) total average cost per patient was 5,334€. **CONCLUSIONS:** PsA can cause patients to become partially or completely disabled, which imposes a significant burden directly on their environment and indirectly to society. Average direct/indirect costs are higher with longer disease duration and greater skin manifestations. Patients may already be driven out from the labour market in their active ages because of the disease's symptoms and variability, leading to reduced social engagement. *exchange rate: 303,59HUF/EUR

PMS26
ECONOMIC MODELING OF THE USE OF BOTULINUM TOXIN A IN A HOMOGENOUS PATIENT POPULATION BASED ON REAL-LIFE CLINICAL PRACTICE: ULIS-II (THE UPPER LIMB INTERNATIONAL SPASTICITY STUDY)
Dinet J[1], Lambrelli D[2], Balcaitiene J[1]
[1]IPSEN Pharma, Boulogne-Billancourt, France, [2]Evidera, London, UK
OBJECTIVES: To evaluate the real life practice of the use of botulinum toxin A (BoNT-A) in post-stroke upper limb spasticity and the economic consequences of fair comparisons of the dosing between either abobotulinumtoxinA (Dysport®) or onabotulinumtoxinA (Botox®) or incobotulinumtoxinA (Xeomin®). **METHODS:** ULIS-II is an observational, prospective study, conducted in 84 centers in 22 countries. Of 456 adults with post-stroke upper limb spasticity presenting for treatment with BoNT-A, 193 patients with the same injected limb segments "upper arm and lower arm" were analyzed for the dose injected for one cycle of BoNT-A. Treatment and concomitant interventions were in accordance with routine local clinical practice. Sample size, mean (SD)/median dose (min-max) in Unit for each BoNT-A and annual cost per patient were calculated using the mean dose administered and considering no vial sharing. An injection interval of 12 weeks was simulated for all BoNT-A treatments and the UK listed public price was used to ascertain annual cost. **RESULTS:** For the abobotulinumtoxinA group (N=141) a mean (SD)/median (min-max) dose of 665 U (280)/500 U (150-1500) was injected, for the onabotulinumtoxinA group (N=37) a mean (SD)/median dose of 183 U (99)/200 U (50-500) was injected and for incobotulinumtoxinA (N=15), a mean (SD)/median dose of 235 U (108)/200 U (100-440) was injected. Based on a BoNT-A injection interval of 12 weeks, the annual cost per patient in the UK would be 1,068 GBP for abobotulinumtoxinA, 1,198 GBP for onabotulinumtoxinA and 1,399 GBP for incobotulinumtoxinA. **CONCLUSIONS:** Considering the real life practice of BoNT-A injections and the comparison of treatment groups treated for the same limb segment, this analysis suggests that the use of abobotulinumtoxinA would result potentially in a reduction in the health care cost for the treatment of spasticity and that more patients could be treated with abobotulinumtoxinA with a given budget.

PMS27
HOSPITALIZATION BURDEN AMONG DIALYSIS PATIENTS IN BRAZIL: AN ANALYSIS OF THE PUBLIC HEALTH SYSTEM DATABASE
Coutinho MB[1], Custodio MR[2], Pecoits-Filho R[3], Borges L[4], Guersoni AC[1]
[1]Amgen Brazil, Sao Paulo, Brazil, [2]Federal University of Uberlandia, Sao Paulo, Brazil, [3]Pontifícia Universidade Católica do Paraná, Curitiba, Brazil, [4]Evidências, Campinas, Brazil
OBJECTIVES: The objective is to compare the hospitalization length of stay and costs associated with comorbidities between dialysis patients and non-dialysis patients. **METHODS:** This was a cross-sectional observational study (from January to December 2010) of a national hospitalization database from the Brazilian Unified Public Healthcare System (Sistema Único de Saúde – SUS). Patients included in the study were hospitalized due to 3 predefined comorbidities categories: heart disease, vascular disease, and osteometabolic diseases, identified using ICD-10 codes. **RESULTS:** A total of 491,644 admissions were observed in patients not on dialysis (control group), while 2,627 admissions were identified in dialysis patients. The comparative analysis of causes of hospitalization showed that a larger proportion of admissions due to heart disease was observed in patients on dialysis (61%) compared to the control group (47.9%), the opposite was observed for vascular and osteometabolic hospitalizations. For all 3 categories, cost of hospitalization for dialysis patients is at least two-fold higher and the length of stay almost 3 times longer (21 days for dialysis patients versus 8 days for non-dialysis) than non-dialysis patients. The greatest differences between these two patient populations are in average costs among dialysis patients hospitalized for osteometabolic disorders versus control group and the highest burden regarding length of hospital stay, due to heart disease. **CONCLUSIONS:** There is a high hospitalization burden among CKD-5D patients in the Brazil health care system. Since inpatient costs were the key cost drivers for CKD, strategies that reduce the risk of hospitalization and increase prevention of comorbidities may substantially decrease the overall health care economic burden.

PMS28
THE COSTS OF DIAGNOSIS AND TREATMENT OF ANKLE SPRAINS AND FRACTURES, 1980-2013: A SYSTEMATIC REVIEW
Bielska IA, Wang X, Johnson AP
Queen's University, Kingston, ON, Canada
OBJECTIVES: Ankle sprains and fractures are common injuries affecting many individuals, often requiring substantial and costly medical interventions. Ankle injuries can have significant physical and economic consequences. Therefore, the objectives of this study were to systematically review and describe the literature on the direct and indirect costs related to the diagnosis and treatment of ankle sprains and fractures. **METHODS:** A systematic literature review of Ovid MEDLINE, EMBASE, Cochrane DSR, ACP Journal Club, AMED, Ovid Healthstar, and CINAHL was conducted for English-language studies on ankle sprains and fractures published from January 1980 to December 2013. Two reviewers assessed the articles for study quality using available giudelines and abstracted the data. **RESULTS:** Overall, 1,415 studies were identified of which 16 were selected for analysis. A majority of the studies were published in the last decade. The costs of ankle sprain diagnosis and management ranged from $495 to $4,667 per patient (2014 USD). The costs of stable ankle fracture diagnosis and management ranged from $89 to $602 per patient. However, the management costs were higher for unstable ankle fractures ($2,680 to $15,095) and open fractures and varied depending on the severity of injury. The economic evaluations were conducted from the societal or health care system perspective. **CONCLUSIONS:** The costs of diagnosing and treating ankle sprains and fractures varied among the studies mostly due to differences in injury severity and the study characteristics. Future studies undertaking economic evaluations should follow the available guidelines and ensure that their methods are transparent and understandable especially the study perspective and the valuation of the costs and outcomes.

PMS29
THE PENSION COSTS OF MUSCULOSKELETAL DISEASES. ESTIMATION OF THE ECONOMIC BURDEN BORNE BY THE ITALIAN SOCIAL SECURITY SYSTEM
Russo S[1], Mariani TT[2], Migliorini R[2], Marcellusi A[1], Mennini FS[3]
[1]University of Rome "Tor Vergata", Rome, Italy, [2]Istituto Nazionale della Previdenza Sociale, Rome, Italy, [3]University of Rome "Tor Vergata", Italy, Rome, Italy
OBJECTIVES: The aim of the study is to estimate the pension costs (social security system in Italy is financed by public expenditure) induced by patients with musculoskeletal disorders (MD) and specifically for rheumatoid arthritis (RA), ankylosing spondylitis (AS) and psoriatic arthritis (PsA) in Italy, between 2009 and 2012. **METHODS:** We analysed the database of National Institute of Social Security (INPS) to estimate for MD, RA, AS and PsA, the total costs of for three types of social security benefits: disability benefits (for people with reduced work ability), disability pensions (for people who are not eligible to be considered as workers) and incapacity pensions (for people without work ability). Also was estimated the productivity loss for RA in the 2013 with data from the National Institute of Statistics and from national literature review. **RESULTS:** From 2009 to 2012 were paid about 320 thousand benefits at a cost of approximately €1.7 billion, for an average of just over 80,000 performances a year with a cost of € 432 million per year. Specifically the total pension burden for RA was about €99 million, for AS was €26 million and for PsA was €12 million. The loss of productivity for AR in 2013 amounted to € 707,425,191 due to 162,360 workers with RA that determine 9,174,221 working days